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## Knowledge-based Information in Vermont Hospitals: A Survey of Library and Information Services in 2010

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*Et al.*

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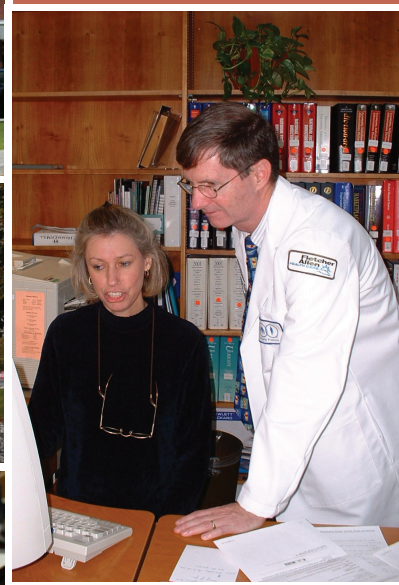
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# Knowledge-based Information in Vermont Hospitals: A Survey of Library and Information Services in 2010



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# Introduction

This report contains the results of a 2010 survey of Vermont hospitals. The purpose of the survey was to provide a snapshot of the health sciences information services currently available to health care providers through Vermont hospitals. We proposed to determine the status of Vermont hospital libraries and the extent of medical information resources (knowledge-based information) available to health care professionals through the hospitals.

We used the phrase “knowledge-based information” (KBI) in the survey and the report to denote medical, nursing and health sciences content that is reported in, or derived from, the medical literature. Knowledge-based information or KBI is the phrase used and defined by the Joint Commission for hospital accreditation purposes. The Joint Commission defines KBI as “a collection of stored facts, models and information that can be used for designing and redesigning processes and for problem solving ... Knowledge-based information is found in the clinical, scientific and management literature.” The Joint Commission standard for hospital accreditation is that “knowledge-based information resources are available, current, and authoritative.”<sup>1</sup>

## Background

Prior to conducting the survey, we searched archives, records and journal reports at the UVM Dana Library Vermont Medical History collection to determine the existence of Vermont hospitals and hospital libraries in the last 40 years or so. Records of the Vermont Hospital Library Development Services (HLDS) program (1972-1975), the annual AHA (American Hospital Association) Guide to the Health Care Field<sup>2</sup>, and medical librarianship literature from 1975 to the present were helpful. Records of membership and hospital representation in Health Science Libraries of New Hampshire and Vermont (HSL-NH/VT) and the records of full membership and participation in NLM’s DOCLINE interlibrary loan system provided further background information.

In 1970 there were 24 hospitals in Vermont but only half had information services with a library and some kind of staffing. Between 1971 and 1984, every hospital in the state established a library and staffed it with a librarian with at least some professional training. In 1975, for example, there were 21 hospitals in Vermont and each one had a library for medical professionals with paid staff. This remarkable feat was accomplished with support from National Library of Medicine funding and education, outreach and training support from the Hospital Library Development Services (HLDS) program headquartered at the UVM Dana Library.<sup>3</sup> In 1985, the number of hospitals had declined to 19, and 15 had retained a librarian on staff: still a majority. To our knowledge, this is the first review of what had happened to Vermont hospital libraries and information services since the HLDS program existed (1979).

VERMONT HOSPITALS AND HOSPITAL LIBRARIES, 1970-2010

Years	Vermont Hospitals*	Hospital Libraries with Paid Staff
1970	24	12
1971-1984	21	21
1985	19	15
1991	17	13
2000	17	9
2010	17	9**

\* Community and academic hospitals, VA Medical Center, Brattleboro Retreat, and Vermont State Hospital  
\*\* Northwestern eliminated the library staff position as of 2011

## Methods

For the survey, we modified the Medical Library Association Benchmarking survey, a nationally validated tool.<sup>4</sup> We reduced the number of questions and restated them so that they referred to the institution rather than the library and could be reasonably answered by either a librarian or a hospital administrator. Question categories included hospital profile characteristics, information resources, library services available, and the authorized users of the hospital’s information resources. The survey questions are provided in *Appendix 2*.

We pre-tested the questionnaire with a hospital librarian and an administrator at two different hospitals, received feedback and made corrections to the survey. Potential respondents were identified through HSL-NH/VT membership and Vermont Area Health Education Centers (AHECs). We received a waiver of review for the survey from the University of Vermont Institutional Review Board. The questionnaire and an invitation to participate were sent by e-mail with attachment to contacts at 17 Vermont hospitals.

## Results

Sixteen participants, representing all but one hospital, returned the questionnaires by mail, e-mail or Survey Monkey web-based survey tool. Some data were verified with respondents where clarification was needed but otherwise we present information as it was reported by the hospitals in the general survey tables section of this report. Notes made by participants are provided beneath each table with a symbol. Some findings are analyzed and presented here in Results.

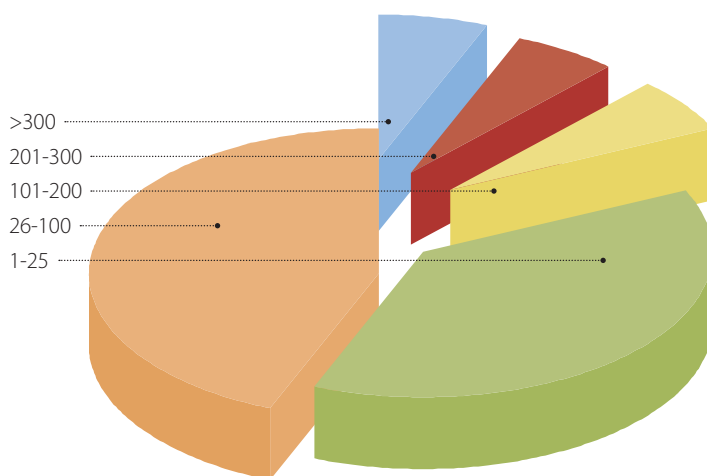
### Hospitals

The sixteen responding hospitals reported that they are non-profit entities and are not in a multiple hospital system. There were 13 community hospitals, one academic medical center, Fletcher Allen, and two specialized institutions: the Veterans Administration Hospital and the Vermont State Hospital. Retreat, a private mental health hospital, did not respond to the survey. The institution sizes vary from 19 licensed beds at Grace Cottage to 422 at Fletcher Allen. Seven of the 13 community hospitals have 25



beds or fewer. Fletcher Allen Health Care (FAHC) is a teaching hospital affiliated with the University of Vermont College Of Medicine. Dana Medical Library provides collections and services for Fletcher Allen and the UVM Colleges of Medicine and Nursing and Health Sciences.

#### SIZE OF VERMONT HOSPITALS (LICENSED BEDS) 2010

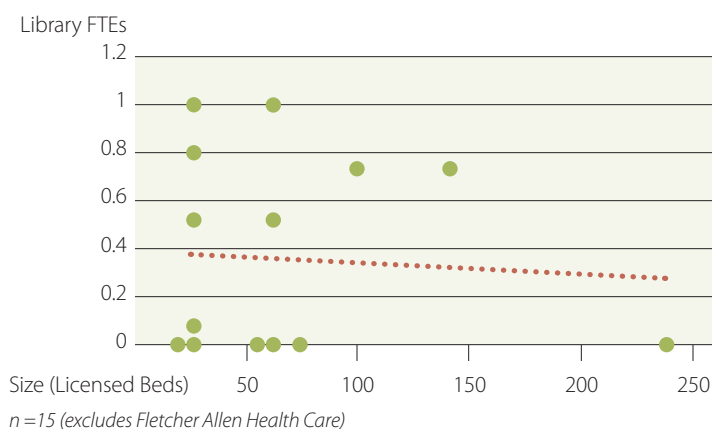


#### Characteristics of Hospital Libraries and Library Staffing

Eleven hospitals reported a physical library space or location. Nine had paid library staff working at least half time (.5 FTE). This number includes Northwestern Medical Center, which at the time of the survey had a vacant library position which has since been eliminated. Six hospitals with libraries had library science master's credentialed staff; four others employed librarians or staff with other credentials at least half-time. The median paid staff FTE was 0.75. University of Vermont/Fletcher Allen reported the most staff with 19 paid employees and Central Vermont reported no paid staff though it reported having a library. Six hospitals reported using volunteers to staff the library from two to 15 hours per week (median 12). Four hospitals reported neither space nor staff.

We used number of licensed beds as the indicator of hospital size. Four of the seven smallest hospitals (25 or fewer beds) have paid library staff. Of the larger community hospitals (60-236 beds), two (50%) have paid library staff. The size of the hospital was not associated with library staff FTEs.

#### HOSPITAL SIZE (LICENSED BEDS) IN RELATION TO LIBRARY FTEs



Library staff report to a variety of departments and services in Vermont hospitals. Medical Staff and Human Resources were the departments that most frequently supervised the library staff or librarian, with three hospitals each.

#### LIBRARY STAFF REPORT TO THIS DEPARTMENT

Department	Hospitals
Medical Staff	3
Human Resources	3
Marketing/P.R.	2
Patient Care	2
Other	1

#### Library Services in Vermont Hospitals

Hospital libraries are open on average 22.5 hours per week (median 30 hours). Six of the 11 hospitals with libraries (55%) have an electronic catalog of resources, two have a card catalog and three have no catalog (although they do have websites). All of the staffed libraries provide computer workstations for patron access to the internet at the library location. Librarians performed an average of 303 literature searches during the reporting year for medical professionals and administrators in support of evidence-based practice. Some also provided instruction in the use of search engines such as PubMed, Medline and nursing resources. We did not include UVM/Fletcher Allen library data in mean calculations and some figures because the data are much larger than at other institutions and libraries, and skew the analysis. Medians, which do include UVM/Fletcher Allen's data, are reported also.

#### VERMONT HOSPITAL LIBRARY SERVICES

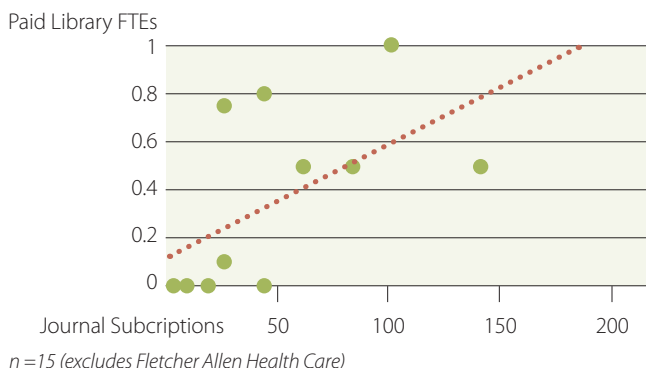
	Median	Mean*
Hours Open Per Week	30	22.5
Internet Computers	2	2
Literature Searches/Reference Questions Per Reporting Year	155	302.5
Instruction Sessions Per Reporting Year	6	6.7

\* excludes Fletcher Allen Health Care

#### Knowledge-based Information Collections and Expenditures

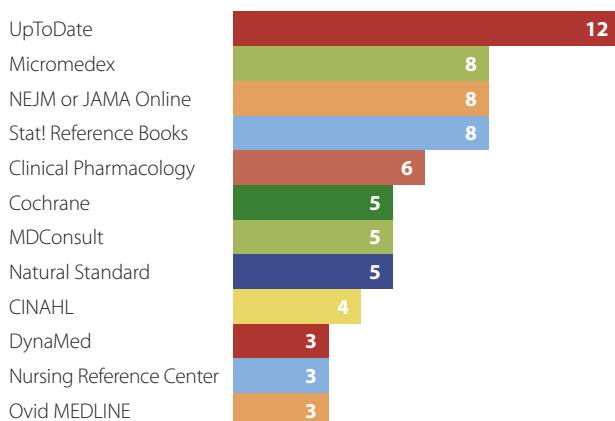
Vermont hospitals subscribed to an average of 58 (excluding Fletcher Allen Health Care) and median of 50 print and electronic journal titles. In general, hospitals without paid library staff had fewer print and electronic journal subscriptions than those with staff. The number of journal subscriptions a hospital had increased as the FTE of library staff increased. Two reported zero journal subscriptions.

## LIBRARY FTES COMPARED TO JOURNAL SUBSCRIPTIONS



Every hospital subscribed to at least one electronic database of medical knowledge-based content. Databases listed in the questionnaire included journal literature citation resources such as OVID Medline and CINAHL, aggregations of a variety of medical texts such as MDConsult and Nursing Reference Center, and expert or evidence-based reviews such as UpToDate and DynaMed. The hospitals licensed an average of 4.8 (median 3) electronic information databases. The most frequently subscribed database was UpToDate, with 12 (75%) subscribing to it. Eight (50%) subscribed to Micromedex drug information resource, and eight to Stat!Ref electronic medical books. The table below shows the most frequently subscribed databases; that is, those with at least three subscriptions in the state.

## MOST FREQUENTLY SUBSCRIBED ELECTRONIC RESOURCES IN HOSPITALS



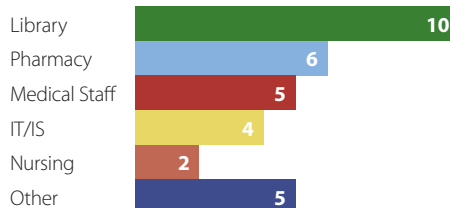
All reported database subscriptions are summarized in *Table 6 in the General Survey Tables, page 8*. Eight hospitals reported subscriptions to resources not named in the survey and those are listed in *General Survey Table 6A, page 8*.

Reported annual expenditures for medical information resources, journals, databases and other materials ranged from \$88 to \$1,200,000. The median expenditure was \$32,000.

The library budget is the most common source of funds for purchase or license of knowledge-based information resources (10 hospitals). Fourteen procured KBI resources from more than one department

budget. Frequently-cited departmental budget sources for KBI included Pharmacy and Medical Staff. One reported that the library budget was the only budget line for knowledge resources.

## HOSPITAL DEPARTMENTS FUNDING KBI RESOURCES



## Borrowing Networks and Agreements

When a hospital medical professional needs a document, usually a journal article that the employer does not own or cannot access online, there are two principal library networks that hospitals use for external acquisition, DOCLINE and VALS (Vermont Automated Libraries System). DOCLINE is NLM's interlibrary loan network, while VALS is the Vermont state library network for all types of libraries. Nine of the 16 reporting hospitals (56%) participate in DOCLINE, six (38%) in VALS, and six belong to no borrowing networks. Only one hospital reported participation in VALS alone without also using DOCLINE

## BORROWING NETWORKS AND AGREEMENTS

DOCLINE	9
VT Library System (VALS)	6
Academic agreements	6
No network	2

Another option for a community hospital is to establish an agreement with a larger academic medical library for article access and delivery. Five hospitals reported agreements with UVM's Dana Medical Library and one with Dartmouth Bio-Medical Libraries.

The 2010 annual costs associated with article delivery for all Vermont hospitals ranged from zero to \$8550.

## Hospital Network Access and Electronic Health Record

Most of the hospitals allow access to their licensed or subscribed knowledge-based resources via the hospital website or portal both on-site and off-site, although at eleven hospitals (69%) access policies differ for the two routes. Fifteen hospitals (94%) allow providers access to networked resources, 12 (75%) allow access for providers and other employees, and three (19%) allow access to the public while at the hospital campus. Off-site, 12 hospitals (75%) allow provider access and five (31%) allow employee access, with two (13%) providing access for selected employees. Three hospitals (19%) provide no off-site access to knowledge-based resources. Seven out of the 11 hospitals with libraries (64%) have a link to the library on their internal network for providers and professionals. Of the eight hospitals with a consumer health collection, five have a web link for the public.

#### AUTHORIZED TO ACCESS KBI RESOURCES VIA NETWORK

	On-site	Off-site
Providers	15	12
Other employees	12	7
Public	3	none
No access	none	3

Hospitals restrict who may change or add content updates to the hospital's portal or website. The department most frequently listed as managing content and allowed to make changes on the website was Information Technology (14). Other employees or departments with this responsibility were Marketing or Public Relations (8), the librarian (5), and various department heads (7). Twelve hospitals have multiple departments updating content, while four allow only the IT/IS department to perform this function.

All of the hospitals reported that they have or are considering an electronic health record (EHR) system. Ten reported having access to knowledge-based content linked through the EHR, four said they didn't know if there was such a link, and two said there was no link. We did not verify what specific content was linked.

## Summary

More Vermont hospitals reported having a physical library than having paid library staff. The information services performed by hospitals with libraries vary widely. Perhaps contrary to expectations, the FTE of paid library staff did not increase with hospital size. Of the seven Vermont hospitals with 25 or fewer beds, four have a library and a librarian. Some of the larger hospitals do not have any library staff. However, the number of print and electronic journal subscriptions and, arguably, access to knowledge-based information by hospital medical professionals did increase as library staff FTE increased. This may suggest that library staff are needed to arrange subscription licenses, maintain them, and advocate for access.

Knowledge-based information is in, or is derived from, the medical literature. It includes research reports published in medical journals, evidence ranked texts and electronic databases, expert opinion, and

government and professional society clinical guidelines. The Joint Commission's standard of effective performance for knowledge-based information resources is that they must be available, current and authoritative (IM.03.01.01). The rationale for the standard is that ready access to KBI by hospital practitioners and staff is needed for maintenance of competence, clinical and management decision making, patient and family information, performance improvement, patient safety, and education and research needs.<sup>5</sup>

This report is intended to help the National Network of Libraries of Medicine – New England Region (NNLM/NER), and the University of Vermont Dana Medical Library, the NNLM resource library for Vermont, plan possible changes or improvements to the services they offer. Partner agencies, including the Vermont State Library and Vermont Area Health Education Centers (AHECs), will consider these results for implications for state library services and continuing education of health care providers. The results may also help the participating hospitals and librarians better understand their own service provision in relation to other hospitals in the state.

The Joint Commission's elements of performance require that hospitals provide access to knowledge-based information resources to support patient care. With reduced funding for subscriptions and fewer libraries and librarians in Vermont hospitals, it remains to be seen how knowledge-based information resources will be acquired, organized, and paid for going forward.

## Acknowledgements

The authors wish to thank Claire La Force, MLS, Rutland Regional Medical Center, for her participation in the planning of the project and the development of the survey instrument and Robert Sekerak, MLS, for researching the background information. Thanks to our partners at UVM College of Medicine Office of Primary Care, Vermont AHECs, and the Vermont State Library for their encouragement and support for the contract proposal. To the hospital librarians who are members of the Health Sciences Libraries of NH/VT, who inspired this project, thank you. Thanks also to those librarians and administrators who participated in the survey.

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## General Survey Tables

**TABLE 1:  
VERMONT HOSPITAL PROFILES: INSTITUTION TYPE, SIZE, AND PRESENCE OF LIBRARY**

Hospital (all non-profit)	Institution Type	Number of Physicians Employed	Number of Institutional FTEs	Licensed Bed Count	Has Library or Med Info Center
Brattleboro	Community hospital	65	450	63	yes
Central Vermont	Community hospital	80	1020	236*	yes
Copley	Community hospital	11	269	25	yes
Fletcher Allen Health Care	Academic medical center	771	5158	422	yes
Gifford	Community hospital <sup>†</sup>	45	425	25	no
Grace Cottage	Community hospital	12	160	19	no
Mt. Ascutney	Community hospital	41	407	60 <sup>‡</sup>	no
North Country	Community hospital	30	600	25	yes
Northeastern Vermont	Community hospital	27	303	25	yes
Northwestern	Community hospital	20	458	70	yes
Porter	Community hospital	48	376	25	yes
Retreat	Mental health facility	11	318	80	no
Rutland	Community hospital	61	926	136	yes
Southwestern Vermont	Community hospital	65	730	99	yes
Springfield	Community hospital	110	308	25	no
VA Medical Center	Government institution	missing	700	60	yes
Vermont State Hospital	Government/mental health	7 <sup>§</sup>	200	54	no

\* Central Vermont: Includes 90 nursing home beds

† Gifford: Hospital owns provider practices/employs providers

‡ Mt. Ascutney: 25 bed acute/ICU, 10 bed rehab unit, 25 bed nursing home

§ Vermont State Hospital: Plus 7 employed through Fletcher Allen Health Care, including medical director and attending

**TABLE 2:  
HOSPITAL LIBRARY PERSONNEL: STAFF, VOLUNTEERS AND SUPERVISOR**

Hospital	MLS Librarian FTE	Other Paid Personnel FTE	Total Paid Library Personnel	Hours per Week for Volunteers	Title of Librarian/ Library Staff Supervisor
Brattleboro	0.5	0	0.5	0	Staff/Community Education Coordinator
Central Vermont	0*	0	0	13	Medical Staff Supervisor
Copley	0	0.5	0.5	15	Human Services Director
Fletcher Allen Health Care	7.0	12.0	19.0	0	UVM Libraries Dean
Gifford	no library				
Grace Cottage	no library				
Mt. Ascutney	no library				
North Country	0 <sup>†</sup>	0.8	0.8	8	Human Resources V.P.
Northeastern Vermont	0	1.0 <sup>‡</sup>	1.0	12	Marketing/Community Health V.P.
Northwestern	0.5 <sup>§</sup>	0	0.5 <sup>§</sup>	0	Human Resources Team Leader
Porter	0 <sup>  </sup>	0.1	0.1	0*	Patient Care V.P.
Rutland	0.75	0	0.75	12	Marketing/PR. Director
Southwestern Vermont	0.75	0	0.75	2	Patient Safety/Quality Director
Springfield	no library				
VA Medical Center	1.0	0	1.0	0	Chief of Staff
Vermont State Hospital	no library				

\* Central Vermont: MLS consultant from Dartmouth, on call

† North Country: Master's in English

‡ Northeastern Vermont: Including 0.4 FTE as Community Health Outreach

§ Northwestern: Position has since been withdrawn

|| Porter: MLS consultant from UVM.05 FTE

\* Porter: Reported less than 1 volunteer hour per week



**TABLE 3:**  
**HOSPITAL LIBRARY HOURS, CATALOG TYPE, INTERNET COMPUTERS, REFERENCE AND INSTRUCTION SERVICES**

Hospital	Hours Open Per Week	Type of Catalog	Internet Accessible Patron Computers	Reference Questions/ Literature Searches Per Year	Instruction Session Per Year
Brattleboro	20	online	2	987	16
Central Vermont	13	none	2	29	0
Copley	20	card	3	77	6
Fletcher Allen Health Care	106	online	40	1138	27
Gifford	no library				
Grace Cottage	no library				
Mt. Ascutney	no library				
North Country	32	online	2	155	3
Northeastern Vermont	40	card	1	1013	13
Northwestern	0	online	2	0	0
Porter	0	none	1	0	0
Rutland	30	online	2	161	23
Southwestern Vermont	30	none	1	103	0
Springfield	no library				
VA Medical Center	40	online	3	500	6
Vermont State Hospital	no library				
Mean*	22.5		1.9	302.5	6.7
Median	30		2	155	6

\* Excludes Fletcher Allen Health Care

**TABLE 4:**  
**LINKS TO HOSPITAL LIBRARY WEBSITE FROM THE HOSPITAL'S PROFESSIONAL AND PUBLIC WEBSITES, AND CONSUMER HEALTH COLLECTION**

Hospital	Link for Professional Personnel	Link for the Public	Consumer Health Collection
Brattleboro	yes	yes	yes
Central Vermont	no	no	no
Copley	yes	yes	yes
Fletcher Allen Health Care	yes	no*	yes
Gifford	no library		
Grace Cottage	no library		
Mt. Ascutney	no library		
North Country	yes	yes	yes
Northeastern Vermont	no	in progress	yes
Northwestern	yes	no	yes
Porter	no	no	no
Rutland	yes	yes	yes
Southwestern Vermont	no	yes	yes
Springfield	no library		
VA Medical Center	yes	no	no
Vermont State Hospital	no library		

\* Fletcher Allen Health Care: The Frymoyer Community Health Resource Center at Fletcher Allen has a link from the hospital's website for the public; Dana Medical Library does not.

**TABLE 5:  
JOURNAL AND ELECTRONIC DATABASE SUBSCRIPTIONS, EXPENDITURES AND FUNDING DEPARTMENTS**

Hospital	Print and E-Journal Subscriptions	Licensed Databases*	Expenditures for Journals & Databases	Departments that Fund Knowledge-based Resources
Brattleboro	61	3	26,539	Library Pharmacy Med staff/physician support
Central Vermont	0	9	54,155	Library Pharmacy Med staff/physician support
Copley	136	2	32,000	Library Pharmacy Nursing
Fletcher Allen Health Care	5,300	23	1,200,000 <sup>†</sup>	Library Pharmacy
Gifford	0	3	12,000	IT/IS Quality management
Grace Cottage	>10	3	15,000	Pharmacy Med staff/physician support Nursing Health information director
Mt. Ascutney	missing	3	missing <sup>‡</sup>	Pharmacy IT/IS Med staff/physician support
North Country	50	6	32,220	Library VP diagnostic & info services
Northeastern Vermont	101	3	14,565 <sup>§</sup>	Library IT/IS Med staff/physician support
Northwestern	78	2	34,828	Library Other departments
Porter	22	3	16,500	Library
Rutland	175	13	150,000	Library Pharmacy
Southwestern Vermont	27	10	40,000	Library Pharmacy
Springfield	42	3	32,000	Library
VA Medical Center	100	8	3,000 <sup>  </sup>	Library Other departments
Vermont State Hospital	3	1	88	IT/IS

\* These figures were derived by counting the resources reported and listed in Table 9.

† Fletcher Allen: UVM Dana Library collection expenditure. By agreement, Fletcher Allen pays the University an amount to support library personnel, collection resources, and services.

‡ Mt. Ascutney: Each physician has at their discretion \$3000 per calendar year to use for subscriptions and CME.

§ Northeastern Vermont: Does not include UpToDate costs, which are paid by physicians' group.

|| VA Medical Center: Figure is for library budget only.

**TABLE 6:  
ELECTRONIC KBI DATABASES LICENSED BY HOSPITALS**

Hospital	Access Medicine	CINAHL	Clinical Pharmacology	Cochrane	DynaMed	Harrison's Online	MDConsult	Micromedex	Natural Standard	NEJM or JAMA Online	Nursing Ref Center	Ovid MEDLINE	Stat!Ref Books	UpToDate	Others	Total
Brattleboro				•									•	•		3
Copley			•				•	•	•				•	•	3	9
Central Vermont								•						•		2
Fletcher Allen Health Care	•	•	•	•	•	•	•	•	•	•	•	•	•	•	9	23
Gifford			•					•						•		3
Grace Cottage										•				•	1	3
Mt. Ascutney												•		•	1	3
North Country				•					•	•		•	•	•		6
Northeastern Vermont		•								•			•			3
Northwestern											•			•		2
Porter			•		•						•					3
Rutland		•	•	•	•		•	•	•	•			•		4	13
Southwestern Vermont							•	•	•	•			•	•	4	10
Springfield								•		•				•		3
VA Medical Center		•		•		•	•	•		•			•	•		8
Vermont State Hospital			•													1
Total	1	4	6	5	3	2	5	8	5	8	3	3	8	12	22	

**TABLE 6A:  
ELECTRONIC RESOURCES LISTED UNDER "OTHERS" BY MORE THAN ONE HOSPITAL**

Hospital	Gale (VT DOL) Database	Lexicomp	Mosby's Nursing Consult	Mosby's Nursing Skills
Copley			•	•
Fletcher Allen Health Care	•			
Grace Cottage		•		
Mt. Ascutney		•		
Rutland	•		•	•
Southwestern Vermont	•		•	•
Total	3	2	3	3

*Additional databases listed by only one hospital under "Others": Copley: ToxEd  
Fletcher Allen Health Care (partial list): Med U Cases, PubMed with Link Out, Procedures Consult, Web of Science, Toxline, Global Health,  
Biosis Previews, Lippincott Nursing Books@OVID  
Rutland: Joanne Briggs Inst. Database*

**TABLE 7:**  
**INFORMATION ACCESS FROM EXTERNAL SOURCES: INTER-LIBRARY NETWORKS, AGREEMENTS AND DELIVERY EXPENDITURES**

Hospital	Borrowing Networks	Service Agreement	Expenditures for Article Delivery (\$)
Brattleboro	DOCLINE Vermont Library System (VALS)	none	300
Central Vermont	none	Dartmouth	8,550
Copley	DOCLINE	none	100
Fletcher Allen Health Care	DOCLINE OCLC	UVM	5,000
Gifford	none	UVM	400
Grace Cottage	none	none	missing
Mt. Ascutney	none	none	0
North Country	DOCLINE Vermont Library System (VALS)	none	995
Northeastern Vermont	DOCLINE Vermont Library System (VALS)	UVM	600
Northwestern	DOCLINE/none*	UVM*	0
Porter	none	UVM	7,200
Rutland	DOCLINE Vermont Library System (VALS)	none	600
Southwestern Vermont	DOCLINE Vermont Library System (VALS)	none	1,200
Springfield	DOCLINE	none	1,000
VA Medical Center	DOCLINE	none	150
Vermont State Hospital	Vermont Library System (VALS)	none	0 <sup>†</sup>

\* Northwestern: DOCLINE participant until 2/2010; UVM agreement began 7/2010

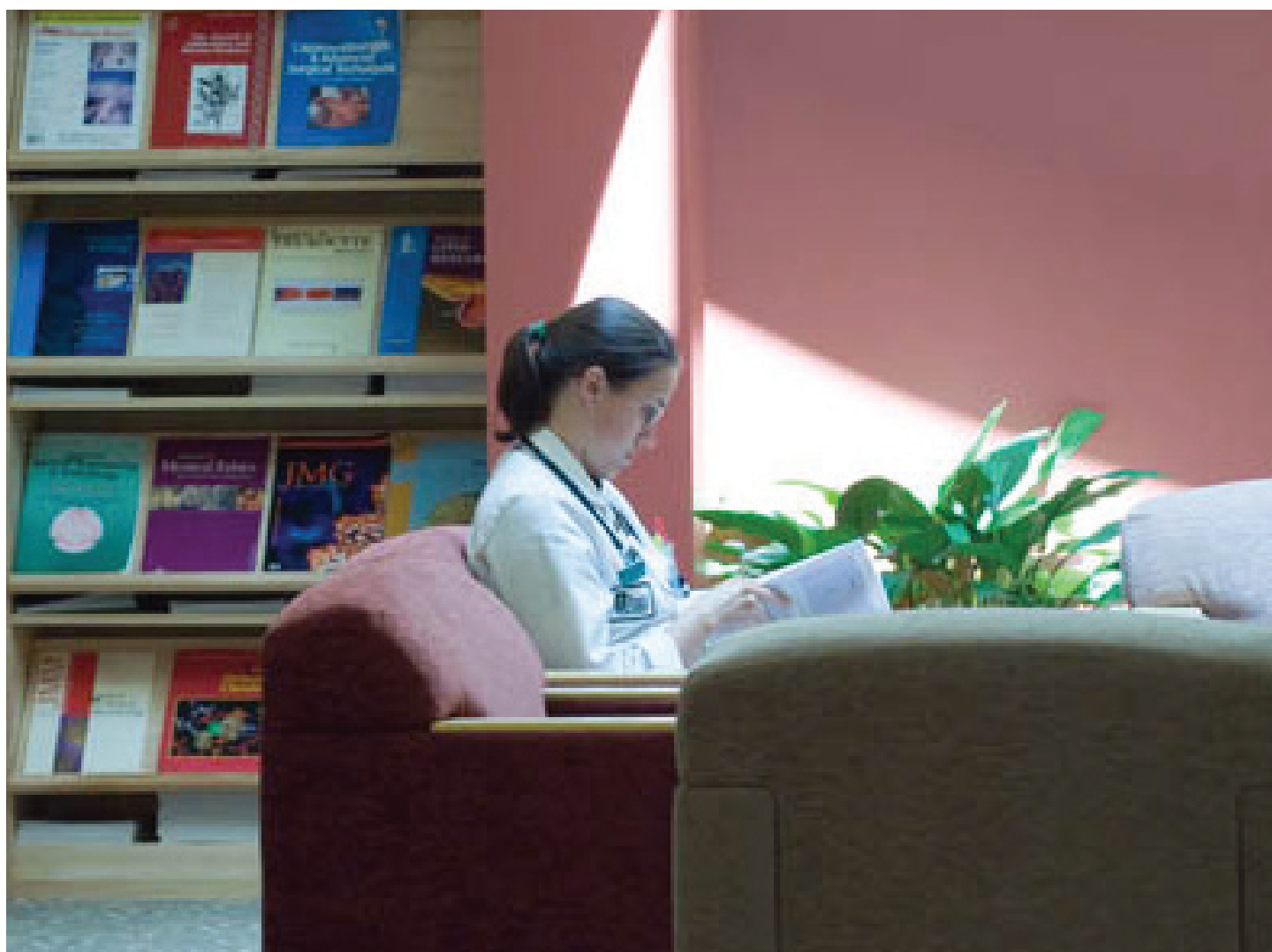
† Vermont State Hospital: Physicians access resources through their Fletcher Allen Health Care IT accounts

**TABLE 8:**  
**AUTHORIZED USERS OF HOSPITALS' LICENSED KNOWLEDGE-BASED RESOURCES ON- AND OFF-SITE, AND WEBSITE UPDATE**

Hospital	Access via Hospital Website	Access Off-site	Updates Content
Brattleboro	Providers, Employees, Public	Providers	IT, Marketing/PR, Librarian, Department Heads
Central Vermont	Providers, Employees	Providers, Employees, Community Providers (non-employees)	IT, Marketing/PR
Copley	Providers, Employees, Public (library's only)	Employees	Marketing/PR, Librarian, Department Heads
Fletcher Allen Health Care	Providers, Employees	Providers	IT
Gifford	Providers, Employees	No access	IT, Marketing/PR, Department Heads
Grace Cottage	Providers, Health Information Director	Providers, Health Information Director	IT, Department Heads
Mt. Ascutney	Providers	Providers, Employees	IT, Marketing/PR
North Country	Providers, Employees	Providers, Employees	IT, Marketing/PR, Librarian
Northeastern Vermont	Providers, Employees	Providers	IT, Marketing/PR, Librarian
Northwestern	Providers, Employees	No access	IT, Department Heads
Porter	Providers, Employees	Providers, Employees	IT
Rutland	Providers, Employees, Community, Patients & Families	Providers, Employees (selected)	IT, Librarian, Department Heads
Southwestern Vermont	Providers, Employees, Consumers	Providers, Employees (selected)	Department Heads
Springfield	Providers, Employees	Providers	IT, Marketing/PR
VA Medical Center	Providers	Providers	IT
Vermont State Hospital	No access	No access	IT

**TABLE 9:  
HOSPITAL ELECTRONIC HEALTH RECORD STATUS AND LINK TO KNOWLEDGE-BASED INFORMATION**

Hospital	EHR System	Linked Knowledge-based Content
Brattleboro	yes	yes
Central Vermont	yes	yes
Copley	yes	don't know
Fletcher Allen Health Care	yes	yes
Gifford	yes	yes
Grace Cottage	yes	yes
Mt. Ascutney	yes	yes
North Country	yes	yes
Northeastern Vermont	yes	don't know
Northwestern	yes	no
Porter	yes	yes
Rutland	yes	yes
Southwestern Vermont	yes	yes
Springfield	yes	no
VA Medical Center	yes	don't know
Vermont State Hospital	yes	don't know





# Appendix 1

## Vermont Hospitals and Survey Contacts

<p><b>BRATTLEBORO MEMORIAL HOSPITAL</b> 17 Belmont Avenue, Brattleboro VT 05301 <b>AHEC region:</b> Southern Vermont <b>Area served:</b> Brattleboro, Dummerston, Hinsdale, Putney, Chesterfield, Guilford, Vernon, Marlboro <b>Survey contact:</b> Jessie Casella, Medical Librarian jcasella@bmhvt.org 802-257-8357</p> <p><b>CENTRAL VERMONT MEDICAL CENTER</b> PO Box 547, Barre VT 05641 <b>AHEC region:</b> Northeastern Vermont <b>Area served:</b> Washington County <b>Survey contact:</b> Eleanor Kaczmarek Supervisor Medical Staff Services Eleanor.Kaczmarek@cvmc.org 802-371-5307 <b>Additional contact:</b> Heather Blunt, Consulting Librarian Dartmouth College heather.blunt@dartmouth.edu 603-650-4953</p> <p><b>COPLEY HOSPITAL</b> 528 Washington Highway, Morrisville VT 05661 <b>AHEC region:</b> Northeastern Vermont <b>Area served:</b> Lamoille County <b>Survey contact:</b> Stacy Wein, Librarian swein@chsi.org 802-888-8347</p> <p><b>FLETCHER ALLEN HEALTH CARE</b> 111 Colchester Avenue, Burlington VT 05401 <b>AHEC region:</b> Champlain Valley <b>Area served:</b> All of Vermont, northern NY, northern NH <b>Survey contact:</b> Marianne Burke, Director Dana Medical Library marianne.burke@uvm.edu 802-656-3483</p> <p><b>GIFFORD MEDICAL CENTER</b> 44 South Main Street, PO Box 2000, Randolph VT 05060 <b>AHEC region:</b> Northeastern Vermont <b>Area served:</b> Randolph, Braintree, Rochester, Bethel, E. Randolph, South Royalton <b>Survey contact:</b> Susan Peterson, Director of Quality speterson@giffordmed.org 802-728-2329</p>	<p><b>GRACE COTTAGE HOSPITAL</b> 185 Grafton Road, Townshend VT 05353 <b>AHEC region:</b> Southern Vermont <b>Area served:</b> Windham County, parts of Windsor and Bennington Counties <b>Survey contact:</b> Mary Morgan, VP Quality mmorgan@gracecottage.org 802-365-3633 <b>Additional contact:</b> Tony Marques, Director Information Services tmarques@gracecottage.org</p> <p><b>MT. ASCUTNEY HOSPITAL &amp; HEALTH CENTER</b> 289 County Road, Windsor VT 05089 <b>AHEC region:</b> Southern Vermont <b>Area served:</b> Windsor, Hartland, Brownsville, Ascutney, Woodstock, Quechee, Pomfret, Barnard, Perkinsville VT, Plainfield, Cornish NH <b>Survey contact:</b> Sherry Bellimer, Physicians Practice Manager sherry.bellimer@mahhc.org 802-674-7344</p> <p><b>NORTH COUNTRY HOSPITAL</b> 189 Prouty Drive, Newport VT 05855 <b>AHEC region:</b> Northeastern Vermont <b>Area served:</b> Orleans &amp; Essex Counties <b>Survey contact:</b> Georgia (Geegee) Zaveson, Medical Librarian gzaveson@nchsi.org 802-334-3256</p> <p><b>NORTHEASTERN VERMONT REGIONAL HOSPITAL</b> 1315 Hospital Drive, PO Box 905, St. Johnsbury VT 05819 <b>AHEC region:</b> Northeastern Vermont <b>Area served:</b> Caledonia &amp; Northern Essex Counties <b>Survey contact:</b> Betsy Merrill, Librarian a.merrill@nvrh.org 802-748-7501</p> <p><b>NORTHWESTERN MEDICAL CENTER</b> 133 Fairfield Street, Saint Albans VT 05478 <b>AHEC region:</b> Champlain Valley <b>Area served:</b> Franklin &amp; Grand Isle Counties <b>Survey contact:</b> Christina Bradley, Human Resources Team Leader cbradley@nmcinc.org 802-524-1069</p> <p><b>PORTER HOSPITAL</b> 115 Porter Drive, Middlebury VT 05753 <b>AHEC region:</b> Champlain Valley <b>Area served:</b> Addison County VT and Ticonderoga NY area <b>Survey contact:</b> Elaine Coon, Staff Development Coordinator ecoon@portermmedical.org 802-388-4723</p>	<p><b>RETREAT HEALTHCARE</b> PO Box 803, Brattleboro VT 05302 No survey response</p> <p><b>RUTLAND REGIONAL MEDICAL CENTER</b> 160 Allen Street, Rutland VT 05701 <b>AHEC region:</b> Southern Vermont <b>Area served:</b> Addison, Rutland, Windsor, Windham, Bennington Counties; northeastern NY; southwestern NH <b>Survey contact:</b> Claire LaForce, MLS, Librarian claforce@rrmc.org 802-747-3777</p> <p><b>SOUTHWESTERN VERMONT MEDICAL CENTER</b> 100 Hospital Drive, Bennington VT 05201 <b>AHEC region:</b> Southern Vermont <b>Area served:</b> Bennington County <b>Survey contact:</b> Gary Strubel, Librarian strg@phin.org 802-447-5120</p> <p><b>SPRINGFIELD HOSPITAL</b> PO Box 2003, Springfield VT 05156 <b>AHEC region:</b> Southern Vermont <b>Area served:</b> Springfield, Ludlow, Bellows Falls, Chester, Andover, Londonderry; Windsor County and part of Windham County <b>Survey contact:</b> Linda A. Hurley, MS RN Director of Professional Development lhurley@springfieldmed.org 802-885-7684</p> <p><b>V.A. MEDICAL CENTER</b> 215 N. Main Street, White River Junction VT 05009 <b>AHEC region:</b> Not applicable <b>Area served:</b> Vermont and New Hampshire <b>Survey contact:</b> Richard DeRosa, Medical Librarian rich.derosa@va.gov 802-295-9363x5236</p> <p><b>VERMONT STATE HOSPITAL</b> 103 S. Main Street, Waterbury VT 05671 <b>AHEC region:</b> Not applicable <b>Area served:</b> Vermont <b>Survey contact:</b> David Mitchell, RN Director of Education and Training David.Mitchell@ahs.state.vt.us 802-241-3057</p>
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## Appendix 2

### Survey Questions

#### GENERAL INFORMATION ABOUT THE HOSPITAL

1. Hospital name and address
2. Contact information for primary person completing this survey including position
3. Contact information for an additional person completing this survey (complete only one survey per hospital)
4. In which Area Health Education Center (AHEC) region is your hospital located?  
☐ Northeastern Vermont AHEC    ☐ Champlain Valley AHEC    ☐ Southern Vermont AHEC
5. Complete answers for the most recent 12-month period for which complete data is available. Please indicate beginning and ending dates.
6. What is the hospital's primary service area (towns or counties)?
7. Does your hospital have a library or knowledge-based information center? ☐ Yes ☐ No

#### IF 7 IS NO, SKIP TO QUESTION 23. INFORMATION ABOUT THE LIBRARY (answer these questions if your institution has a library):

8. What is the title of the person to whom the library director or librarian reports?
9. How many hours per week is the library open for service? (Include only those hours it is staffed and providing normal services)
10. Does the library staff include a librarian with a Master's degree from an ALA-accredited institution (MLS)? ☐ Yes ☐ No
11. If yes, what is the full time equivalent (FTE) for the MLS librarian?
12. What is the FTE assigned for any other employed non-MLS staff?
13. How many hours per week do volunteers work in the library?
14. How many internet-accessible computers does the library provide for use by patrons?
15. Does the library provide reference or literature search services? ☐ Yes ☐ No
16. If yes, how many reference questions or literature search requests were received and answered during the 12 months under consideration?  
 (Reference refers to any request for information assistance and/or literature search for a purpose relevant to the mission of the hospital.  
 Do not include article or inter-library loan requests here.)
17. Does the Library offer classes, tutorials, or other instruction for professional staff and employees? ☐ Yes ☐ No
18. If yes, approximately how many sessions per year?
19. What type of catalog of resources does your library maintain? ☐ Online ☐ Card catalog ☐ No catalog
20. Does your library maintain a consumer health collection or resources that are accessible by the community/general public? ☐ Yes ☐ No
21. Does the library have a website that is visible or linked from the hospital's main website used by professional personnel? ☐ Yes ☐ No
22. Does your library have a link from the hospital's public website? ☐ Yes ☐ No ☐ In progress  
 (the website that has information for patients and the community)

#### ACCESS TO KNOWLEDGE-BASED INFORMATION RESOURCES AT THE HOSPITAL:

23. How many print and electronic journal subscriptions for use by medical and professional staff does the hospital maintain?
24. Which of the following electronic resources are licensed by your hospital for professional staff? Check all that apply or mark none.
 

<input type="checkbox"/> Access Medicine	<input type="checkbox"/> New England Journal of Medicine or JAMA
<input type="checkbox"/> MDConsult	<input type="checkbox"/> Stat!Ref Online Book resource
<input type="checkbox"/> CINAHL	<input type="checkbox"/> Micromedex
<input type="checkbox"/> Up-to-Date	<input type="checkbox"/> Harrison's Online
<input type="checkbox"/> Cochrane Library	<input type="checkbox"/> Natural Standard
<input type="checkbox"/> DynaMed	<input type="checkbox"/> Clinical Pharmacology
<input type="checkbox"/> Ovid MEDLINE	<input type="checkbox"/> None, no electronic knowledge-based resources licensed
<input type="checkbox"/> Nursing Reference Center (EBSCO)	<input type="checkbox"/> Other (please list by name)
25. Does the hospital provide professional staff and employee access to knowledge-based electronic information resources via the hospital's intranet or portal? ☐ Yes ☐ No ☐ Other response \_\_\_\_\_
26. What categories of personnel may access the hospital's knowledge-based electronic resources while at the hospital? Mark all that apply.
 

<input type="checkbox"/> Medical professionals and providers
<input type="checkbox"/> Any hospital employee, including providers
<input type="checkbox"/> Others (please list) _____

27. What categories of personnel may access the hospital's knowledge-based electronic resources from home or off-site location? Mark all that apply.

- ☐ All employed medical professionals and providers
- ☐ Any hospital employee, including providers
- ☐ Community healthcare providers (non-employees)
- ☐ Others (please list) \_\_\_\_\_

28. What categories of personnel have the authority or responsibility to add or update content on the hospital's intranet or portal? Mark all that apply.

- ☐ IT personnel
- ☐ Marketing or public relations department
- ☐ Librarian
- ☐ Various department heads/leaders
- ☐ Others (position) \_\_\_\_\_

29. Does your hospital have, or is it considering purchase of, an Electronic Health Record system? ☐ Yes ☐ No ☐ I don't know

30. If yes, are there plans for linking/integrating knowledge-based resources to the Electronic Health Record system? ☐ Yes ☐ No ☐ I don't know

#### INTERLIBRARY LOAN SERVICES:

31. Which reciprocal inter-library borrowing networks does the hospital use or belong to? Check all that apply or mark none.

- ☐ DOCLINE
- ☐ OCLC
- ☐ Vermont State Library System
- ☐ Others (please list) \_\_\_\_\_
- ☐ None

32. Does your hospital have a contract or agreement with an academic medical library for information services in addition to, or instead of, those services provided by the hospital? ☐ Yes ☐ No

33. If yes, with what institution does the hospital have a contract or agreement for information or library services?

- ☐ University of Vermont
- ☐ Dartmouth
- ☐ Other (please specify) \_\_\_\_\_

#### EXPENDITURES FOR ELECTRONIC KNOWLEDGE-BASED INFORMATION RESOURCES:

34. What are the hospital's annual expenditures for purchase or subscription to knowledge-based print and electronic resources (books, journals, and databases or aggregations) for the 12 month period covered by this survey? \$ \_\_\_\_\_

35. What are the hospital's annual expenditures for "just in time" information purchases, such as journal article delivery from any source, including inter-library loans, publishers, and document supply services? \$ \_\_\_\_\_

36. What departments or cost centers pay for any knowledge-based information resources in your hospital? Mark all that apply.

- ☐ Library
- ☐ Pharmacy
- ☐ Information Services department/IT
- ☐ Medical staff office/physician support
- ☐ Nursing
- ☐ Other (please list) \_\_\_\_\_

**INSTITUTIONAL PROFILE:** The questions in this section can be completed using data provided in the most recent edition of the AHA guide.

37. Institutional type (choose one):

- ☐ Hospital, not in a system
- ☐ Hospital, part of a system
- ☐ Mental health facility
- ☐ Government institution – federal, state or city/county
- ☐ Other (specify) \_\_\_\_\_

38. Profit/non-profit status ☐ For Profit ☐ Not-for-profit

39. Number of physicians employed

40. Number of institutional FTEs

41. Total bed count for this hospital

**ADDITIONAL COMMENTS OR INFORMATION** (please specify question number if applicable)



University of Vermont  
Dana Medical Library  
Burlington, VT 05405  
<http://library.uvm.edu/dana>

For questions or more information regarding the Survey, please contact Marianne Burke, MLS, AHIP, at (802) 656-3483 or [marianne.burke@uvm.edu](mailto:marianne.burke@uvm.edu).